Abstract

The invention relates to organically modified, stable in storage, UV curable, NIR permeable silicic acid polycondensates which are photostructurable in layers having a thickness of 1 to 150 µm. The invention also relates to the production and use thereof as negative resists. The polycondensates according to the invention are obtainable by condensation of organically modified silanediols of the formula I with organically modified silanes of the formula II.

$Ar_2Si(OH)_2$ (I) $RSi(OR')_3$ (II)

The radicals are identical or different and have the following meaning:

Ar = a radical having 6 to 20 carbon atoms and at least one aromatic group,

R = an organic radical having 2 to 15 carbon atoms and at least one epoxy group and/or at least one C=C double bond,

R' = methyl or ethyl.

Condensation occurs without the addition of water. The molar ratio of said compounds I and II is 1 : 1. Up to 90 mole percent of said compound of the formula II can be replaced by co-condensable compounds of boron, aluminum, silicon, germanium, titanium and zirconium.

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